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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,701	04/26/2005	Hadrian Nicholas Fraval	GH-ROF-001	9164
47649	7590	06/27/2006	EXAMINER	
KENNETH M. FAGIN 136 SUMMER WALK DRIVE GAITHERSBURG, MD 20878			CARTER, WILLIAM JOSEPH	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/527,701	Applicant(s) FRAVAL, HADRIAN NICHOLAS	
	Examiner William J. Carter	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/11/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the dish reflectors and the secondary reflectors reflecting white light to their respective waveguides so that wavelengths outside the normal visible spectrum are not supplied to the vessel of claim 10; and infrared radiation being reflected to an ancillary light guide or otherwise collected so that the infrared radiation can be used as a heat source to provide supplemental heating to the building or for water heating of claim 19 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

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pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

On page 1, lines 32-35 need to be revised for grammar and coherency.

On page 7, line 7, "the vessel 30" should be changed to "the vessel 20."

Appropriate correction is required.

Claim Objections

Claims 4, 5, 7, 9 are objected to because of the following informalities:

In claim 4, line 3, "the junction member" lacks antecedent basis.

In claim 5, lines 3-4, "the at least one room of the building" lacks antecedent basis.

In claim 7, line 1, "the junction means" lacks antecedent basis.

In claim 7, line 4, "the first light guides" lacks antecedent basis.

In claim 7, line 5, "seconde" should be changed to "second."

In claims 7 and 9, "the second waveguides" lacks antecedent basis.

In claim 9, line 4, "the energy sensor" lack antecedent basis.

In claim 10, line 7, "the reflect" should be changed to "the reflector."

In claim 10, line 10, "the light guides" lack antecedent basis.

In claim 11, "the focal point" lacks antecedent basis.

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In claim 11, “the focal point the focal point” should be changed to “the focal point.”

Claim 11 is incoherent.

Claim 12 contradicts the claim from which it is dependent, claim 10, by saying “a concave focusing mirror...for reflecting the light to a further point at which the first end of the first light guide is located.” Claim 10 states “a reflector for reflecting light towards a point; a light guide having a first end located at the point.”

In claims 13 and 15, lines 10, “the second waveguides” lack antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim has not been considered on its merits due to the incoherency of the claim language.

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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Eisenman et al. (6,840,645).

With respect to claim 1, Eisenman teaches a light system for a building (Fig. 1), comprising: at least one light collector (10, 15, and 20) for collecting ambient light (S); and a light guide (25 and 30) for conveying light from the collector to a room of a building (column 1, lines 17-18).

As for claim 2, Eisenman teaches the system (Fig. 1) further includes a light junction member (50), and the light guide comprises a first light guide (25) extending between the collector (10, 15, and 20) and the junction member (Fig. 1), and a second light guide (30) extending from the junction member to the room of the building (Fig. 1).

As for claim 5, Eisenman teaches a plurality of second light guides (30) extending from the light junction member (50) for conveying light from the junction member (Fig. 1) to the at least one room of the building (column 1, lines 17-18).

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As for claim 6, Eisenman teaches a plurality of rooms of the building are illuminated (column 1, lines 17-18) by the lighting system (Fig. 1) and a plurality of second light guide (30) extend from the light junction member (50) to each room of the building (Fig. 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eisenman in view of Mori (4,425,905).

With respect to claim 3, Eisenman teaches all of the claimed elements, as discussed above, as well as the light collector (10, 15, and 20) comprises a dish reflector (10) for reflecting ambient light (S) towards a focal point (F), a secondary reflector (20) for reflecting light (Fig. 1) into the first light guide (25). Eisenman does not explicitly teach the secondary reflector positioned at the focal point. Mori, also drawn to light system for buildings, teaches a secondary reflector (10) positioned at a focal point (column 2, lines 49-51) of a dish reflector (1). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the positioning of Mori in the lighting system of Eisenman, in

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order to generate a substantially parallel condensed beam (column 2, lines 49-51).

Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eisenman in view of Mori (4,389,085).

With respect to claims 4 and 10, Eisenman teaches all of the claimed elements, as discussed above, as well as a light collector (10, 15, and 20) for collecting ambient light (S), each collector comprising a reflector (20) for reflecting light towards a point (15); a light guide (25) having a first end located at the point for receiving light from the reflector (Fig. 1); a light accumulating vessel (50) having a reflective internal surface (column 2, lines 38-34), the vessel being connected to the light guide so that light reflected into the light guide is conveyed to the vessel and propagates within the vessel by reflection from the internal surface of the vessel (column 2, lines 38-54); and a plurality of second light guides (30) extending from the vessel to rooms of the building for conveying light from the vessel to the rooms of the building to illuminate the rooms (column 1, lines 17-18). Eisenman does not explicitly teach a plurality of the light collectors provided, each collector being connected to the junction member by a respective first light guide. Mori teaches a plurality of the light collectors (61'_n) provided, each collector being connected to a junction member (62) by a respective first light guide (61_n). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the plurality of light collectors of Mori in the lighting system of Eisenman, in order to capture sunrays incident from all directions (column 14, 51-55).

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eisenman in view of Humer (3,932,023).

With respect to claims 7 and 8, Eisenman teaches all of the claimed elements, as discussed above, as well as the junction means (50) comprises a vessel so that light which is conveyed into the vessel by the first light guide (25) reflects within the vessel until the light enters the second light guide (30) and is conveyed to the room to illuminate the room (column 1, lines 17-18). Eisenman does not explicitly teach the vessel is spherical having a highly reflective inner surface and being lined with a good reflective. Humer, drawn to light junction members, teaches a light junction member (10) comprising a vessel (30) that is spherical (Fig. 2) having a highly reflective inner (column 1, lines 66-68) surface (32) and being lined with a good reflective (column 2, lines 1-2). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the light junction member of Humer in the lighting system of Eisenman, in order to optically couple multiple light guides (Fig. 2).

As for claim 9, Eisenman further teaches the vessel (50) includes intensity sensors (60) for monitoring the intensity of prescribed wavelengths or light within the vessel (column 3, lines 7-10), and control means (column 2, lines 38-62) responsive to the intensity sensors for controlling at least one light source (40) for supplying light into the vessel to maintain the light in the vessel as substantially white light (Abstract; light from conventional sources and natural sunlight are inherently white light) so the white light is supplied to the rooms by the second waveguides (30).

Claims 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eisenman and Mori ('085) as applied to claims 4 and 10 above, and further in view of Mori ('905).

With respect to claims 12 and 15, Eisenman and Mori ('085) teach all of the claimed elements, as discussed above, as well as Eisenman teaches a light collector (10, 15, and 20) for collecting ambient light (S), each collector comprising a dish reflector (10) for reflecting light towards a focal point (F) and a secondary reflector; a light guide associated with the collector (25) for receiving light reflected by the secondary reflector (Fig. 1); a light accumulating vessel (50) having a reflective internal surface (column 2, lines 38-42), the vessel being connect to the light guide so that light reflected into the light guide from the secondary reflector is conveyed to the vessel (Fig. 2) and propagates within the vessel by reflection from the internal surface of the vessel (column 2, lines 38-54); and a plurality of second light guides (30) extending form the vessel to rooms of the building for conveying light from the vessel to the rooms of the building to illuminate the rooms (column 1, lines 17-18). Eisenman and Mori ('085) do not explicitly teach a secondary reflector positioned at the focal point. Mori ('905) teaches a secondary reflector (10) positioned at a focal point (column 2, lines 49-51) of a dish reflector (1). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the positioning of Mori ('905) in the lighting system of Eisenman, in order to generate a substantially parallel condensed beam (column 2, lines 49-51).

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As for claims 13 and 16, Eisenman further teaches the vessel (50) includes a plurality of intensity sensors (60) for measuring the intensity of prescribed wavelengths or light within the vessel at various wavelengths (column 3, lines 7-10), control means (column 2, lines 38-62) connected to the intensity sensor, a light source (40) for supplying light into the vessel connected to the control means (Fig. 1) so that the control means can control the light source to provide illumination into the vessel for maintaining the light within the vessel as substantially white light (Abstract; light from conventional sources and natural sunlight are inherently white light) so the white light is supplied to the rooms of the building (column 1, lines 17-18).

As for claims 14 and 17, Eisenman further teaches the light source (40) is a fixed light source connected to the vessel (50) (Fig. 1).

As for claim 18, Eisenman further teaches the dish reflector (10) and the secondary reflector (20) reflect white light to their respective waveguides so that wavelengths outside the normal visible spectrum are not supplied to the vessel (column 2, line 63-column 3, line 3).

As for claim 19, Eisenman further teaches infrared radiation (heat from conventional light sources is infrared radiation) is collected so that the infrared radiation can be used as a heat source to provide supplemental heating to the building (column 3, lines 3-6).

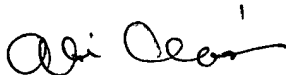
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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Carter whose telephone number is (571)272-0959. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea can be reached on (571)272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


ALI ALAVI
PRIMARY EXAMINER

wjc
06/19/06